From:	Tzhone, Stephen
To:	Huling, Scott
Subject:	FW: Inormation for Arkwood Meeting on Wednesday
Date:	Wednesday, April 29, 2015 1:14:00 PM
Attachments:	Arkwood TEQ data-DMC analysis.xlsx

From: Berg, Marlene
Sent: Tuesday, April 28, 2015 3:03 PM
To: Tzhone, Stephen
Cc: Crumbling, Deana; Poore, Christine; Bartenfelder, David
Subject: Inormation for Arkwood Meeting on Wednesday

Steve,
I am sending you info for our meeting tomorrow afternoon.
Directly below are my comments.
Deana's comments are found in the following email, as well as the attached file *Arkwood TEQ data*.
Marlene

OSRTI Comments on PRP's March 31, 2015, *Draft Dioxin Reassessment at Arkwood, Inc. Superfund Site Risk Evaluation of Analytical Data from Decision Unit Sampling*

Dave B
Any comments on ground water tracing study?
Region 6 has been working with Dave Jewett (ORD/Ada)

Deana,
Please see email, below.

I'll finish with my comments

- Soil screening levels. These are ok.

Future land use, industrial worker. 730 pg/g (same as dioxin RSL for industrial soil).
Current land use, maintenance worker. 21,100 pg/g. (Difference between this and RSL is EF, i.e., 15 days/yr vs. RSL industrial EF of 250 days/yr.)

- Principal threat level for dioxin in soil, based on toxicity, direct contact.

I'll talk about this tomorrow, but soil under the cover should be ok.

- Covered soil

There might be some changes based on Deana's analysis, but based on the unadjusted TEQ concentrations in the March 31 report, soil dioxin TEQ concentrations of the cover do not exceed 730 pg/g.

Uncovered soil

Page 5 of the PRP's report:

The maximum unadjusted and adjusted TEQ concentrations for each of the Decision Units were compared to the TCDD soil screening levels calculated for the industrial worker and maintenance worker scenarios and these are summarized in Table 6. Comparing the unadjusted TEQ concentrations to the industrial worker soil screening level, only Decision Unit 2 (Capped Area) has a maximum TEQ soil concentration below 730 pg/g. In contrast, only Decision Unit 6 (Uncapped Area West) and Decision Unit 7 (Railroad Ditch) had adjusted TEQ concentrations greater than 730 pg/g. None of the Decision Units had either unadjusted or adjusted maximum TEQ concentrations above the maintenance worker soil screening level of 12,100 pg/g. This indicates that, under the current exposure conditions at the site, the PCDD/F concentrations in soil at these seven Decision Units do not pose a noncancer hazard.

Jon R's comment:

Comments on the draft Dioxin Reassessment at Arkwood, Inc. Superfund Site Risk Evaluation of Analytical Data from Decision Unit Sampling Report:

1. Page 5, Comparison to Soil Screening Levels: The last paragraph of this section should state that under potential future industrial worker conditions, the PCDD/F concentrations in surface soil at Decision Units 6 (uncapped area west) and 7 (railroad ditch) could pose a noncancer hazard.

As there is a #1, does Jon have any more comments on the draft dioxin reassessment?

My comments

I agree with Jon's comment in that while it appears that the site is protective for current land use (i.e., for the maintenance worker), the uncovered areas are not protective for future land use, which we also consider, i.e., industrial use.

While I'll wait to hear from Deana, according to unadjusted values in the PRP's March 31, 2015, report, the following areas exceed 730 pg/g in uncovered soil:

DU1 uncapped area east
DU3 ditch north
DU4 ditch south
DU5 berm area
DU6 uncapped area west

DU7 railroad ditch

From: Crumbling, Deana
Sent: Tuesday, April 28, 2015 3:00 PM
To: Berg, Marlene
Subject: RE: Arkwood question

Here is my analysis of the data. The first sheet is my summary of the analysis showing the UCLs that should be used.

There are a number of issues with their work.
1) In addition to "adjustments" that are not legit according to the definition of soil,
2) they are defaulting to the max result if the UCL is higher (which usually it is), which is not correct for data from incremental sampling (as I carefully explained to them previously in comments), and
3) they are using the Chebyshev equation incorrectly, so that their Chebyshev UCLs are calculating out a bit lower than they should be.

--Deana

From: Berg, Marlene
Sent: Tuesday, April 28, 2015 10:24 AM
To: Crumbling, Deana
Subject: Re: Arkwood question

Deana,
Thanks very much w/r to using the unadjusted data.
And, I will await your final analysis.
Marlene

From: Crumbling, Deana
Sent: Tuesday, April 28, 2015 10:18 AM
To: Berg, Marlene
Subject: RE: Arkwood question

Ok, I'm reading through the document, and they "adjusted" the TEQ concentration based on the coarse (>2 mm) fraction that was removed from the sample. That adjustment is not appropriate since the we are interested in the dioxin TEQ concentration in "soil", and soil is the material <2 mm. So "adjusting" (reducing) the concentration to account for the amount of coarse material is not proper.

So use the unadjusted concentrations in the document.

Also, I'm attaching the TEQ data I got by running their raw data through the EPA TEQ Calculator. There may be a difference between my TEQ results and theirs…haven't gotten a chance to evaluate that yet. I'm still working on understanding which DUs the samples represent and which ones have

field vs lab replicates so I know how to crunch the DU results appropriately to get UCLs.

--Deana

From: Berg, Marlene
Sent: Tuesday, April 28, 2015 8:34 AM
To: Crumbling, Deana
Subject: Arkwood question

Deana,
As per my voice mail message, in looking at the PRP's March 31, 2015, draft dioxin reassessment, do you recommend that we use the unadjusted or the adjusted TEQ concentrations for the dioxin in soil?

Marlene